

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MISSOURI  
EASTERN DIVISION**

**AVANTE INTERNATIONAL )  
TECHNOLOGY CORPORATION, )**

**Plaintiff, )**

**vs. )**

**Case No. 4:06cv0978 TCM**

**PREMIER ELECTION SYSTEMS, )  
and SEQUOIA VOTING SYSTEMS, )**

**Defendants. )**

**ORDER, FINDINGS, AND CONCLUSIONS  
ON INEQUITABLE CONDUCT**

This patent dispute is before the Court following a six-day trial, part of which concerned Premier Election Systems' and Sequoia Voting Systems' inequitable conduct defense to Avante International Technology Corporation's claims of patent infringement. At the close of all the evidence, the jury was instructed on, among other things, that defense and was given special interrogatories on the issue of materiality. Based upon the evidence and applicable law, the Court finds and concludes as follows.

**Findings of Fact**

1. Dr. Kevin Kwong-Tai Chung is the primary inventor for United States patent numbers 6,892,944 ("the '944 patent") and 7,077,313 ("the '313 patent") and is the president of Plaintiff, Avante International Technology Corporation ("Avante"). He was primarily responsible for drafting all provisional applications for the '944 and '313 patents. Mr. Clem

Berard, a licensed patent attorney, drafted the non-provisional applications with assistance from Dr. Chung. Mr. Berard represented the inventors throughout the prosecution of both patents. The two patents relate to equipment and methods used to scan and count ballots for public elections. Avante alleges in its complaint that Premier Election Systems and Sequoia Voting Systems ("Defendants") manufacture optical scanning voting machines that process and tabulate paper ballots marked by the voters and that infringe on its '944 and '313 patents.

2. Defendants presented the following three theories of inequitable conduct at trial:

(a) During a February 2004 search of published patent and patent applications on the Patent Trademark Office ("PTO") website, Dr. Chung discovered a patent application which led to U.S. Patent Nos. 7,100,828 and 7,163,147 (the "Cummings patent"). The Cummings patent involved electronic access to voting for disabled voters using a touchscreen mechanism. Dr. Chung failed to disclose the Cummings patent to PTO during the prosecution of the '944 patent;

(b) Dr. Chung also failed to disclose U.S. Patent No. 5,248,872 ("the Stewart patent") to the PTO during the prosecution of the '944 patent; and

(c) Dr. Chung withheld or misrepresented information concerning the PageScan II electronic scanner during the prosecution of the '944 and '313 patents.

The Cummings Patent.

3. Both the '944 and '313 patents claim priority to a provisional application filed on October 1, 2001. The formal application date of the '944 patent is September 30, 2002.

4. In February 2004, Dr. Chung downloaded two non-provisional patent applications regarding the Cummings patent from the PTO website. The Cummings non-provisional application was filed on June 4, 2002, and claimed a priority date of July 26, 2002. In June 2004, Dr. Chung amended the '944 patent application to include claims directed to automated ballot marking. Dr. Chung believed that he was entitled to amend the application because the previous filings of the patent application had referenced direct recording electronic voting equipment. He did not disclose the Cummings patent to the PTO because he believed that it was not prior art due to the priority dates cited herein. Dr. Chung further testified that he did not intent to deceive the PTO in failing to provide the Cummings information and, at worst, the failure to disclose the Cummings patent was a mistake.

5. Mr. Upchurch, Plaintiff's expert witness, testified that the Cummings patent is not prior art to the '944 patent because of the timing of the application and that there was no requirement that Dr. Chung advise the PTO of the Cummings patent. On the other hand, Mr. Thesz, Defendants' expert, testified that the information should have been provided to the patent examiner, who should have been permitted to make the decision on which patent had priority.

6. The jury found that the Cummings references were material to the '944 patent.

The Stewart Patent.

7. The Stewart patent teaches intermixing ballot styles and that ballots need not be sorted – essentially, jurisdictional identifier language. (Def. Ex. J; Stewart Patent Col. 16, ll. 14-18; Col. 9, ll. 17-21.)

8. On November 22, 2004, the PTO issued a notice of allowance on the '944 patent. (Defs. Exs. 0-8.) The '944 patent was issued on May 17, 2005, and the patent fee was paid on January 5, 2005. (Defs. Ex. C.) According to Mr. Thesz, the '944 file remained open until the patent issuance date and the applicants could have pulled back the allowance notice prior to that date.

9. On December 2, 2004, the PTO issued a rejection of claims of the '313 patent, citing the Stewart patent and its use of jurisdictional identifiers. (Defs. Ex. E at 93-97.) Mr. Berard wrote the patent examiner that the rejection based upon the Stewart patent was improper. (Id. at 142-44.) Neither Dr. Chung nor Mr. Berard provided the Stewart references in connection with the '944 patent application.

10. Acknowledging that Mr. Berard's failure to provide the Stewart patent in connection with the '944 patent was a mistake, Dr. Chung testified that he thought that it was not necessary to do so because Mr. Karl Frech, the patent examiner for both the '944 and '313 patents, had referenced the Stewart patent ten days after the notice of allowance for the '944 patent. Dr. Chung testified that he did not intend to deceive the PTO, nor did he act in bad faith.

11. Mr. Upchurch testified that the Stewart patent was cumulative of U.S. Patent Nos. 5,610,383 ("the Chumbley patent") and 6,250,548 ("the McClure patent") which were already before the patent examiner in connection with the '944 patent. According to Dr. Shamos, another expert for Defendants, statements made by Mr. Berard and Dr. Chung to the patent examiner of the '944 patent that "nothing in Boran or *any other reference* of

record" taught the key finding of the '944 patent directed the patent examiner away from mixing ballots and, therefore, was deceptive. Additionally, Mr. Thesz testified that the rule book relied upon by patent examiners, The Manual of Patent Examining Procedure ("MPEP"),<sup>1</sup> warns that examiners are busy and that relevant disclosure should be made in all co-pending prosecution files. Additionally, the MPEP advises that the applicant cannot rely on the memory of the patent examiner. Dr. Shamos testified that the McClure reference in the '944 patent disclosed jurisdictional identifiers.

12. The jury found the Stewart patent references to be material information with regard to the '944 patent.

PageScan II References.

13. In late August 2001, representatives of Peripheral Dynamics, Inc. ("PDI") and Avante met at a Pennsylvania election systems trade show. On September 5, 2005, PDI contacted Avante and Dr. Chung in an attempt to sell the PageScan II device to Avante. PDI demonstrated the PageScan II to Avante on September 27, 2001. Avante purchased and received a PageScan II device and its related materials and specifications.

14. The PageScan II is an optical scanning device which can scan on a fixed grid pattern or a full page. The PageScan II is not a voting machine; the president of PDI, John

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<sup>1</sup>"The MPEP does not have the force and effect of law: however, it is entitled to judicial notice as the agency's official interpretation of statutes or regulations, provided that it is not in conflict with the statutes or regulations." **REFAC Int'l, Ltd. v. Lotus Dev. Corp.**, 81 F.3d 1576, 1584 n.2 (Fed. Cir. 1996)

Hyer, testified that his company does not sell voting machines. PageScan II could, along with other equipment, provide the imaging of ballots in a voting process. Victor Dong, the co-inventor of both the '944 and '313 patents, evaluated the PageScan II and other optical scanning devices and found them to be unsuitable for the '944 and '313 inventions. The materials and specifications of the PageScan II were set aside at the Avante office.

15. Dr. Chung's October 1, 2001, provisional application for the '944 patent briefly described the PageScan II as follows:

Suitable optical scanning equipment should have both the OCR [optical character recognition] capability to recognize the printed randomly generate number with high accuracy, the ability to scan and store the 'write-in' votes, and an ability to decipher the choices made by the voter. One example is the PageScan II made by Peripheral Dynamics Inc. of Plymouth Meeting, PA. (Defs. Ex. A-8 at 5-6.)

The '944 patent contains an incomplete description of the PageScan II, and the '313 patent inaccurately states that PageScan II is capable of reading only in a fixed grid pattern.

16. The PageScan II materials and manuals were not provided to the patent examiner by Dr. Chung or Mr. Berard. Dr. Chung testified that he did not believe that it was necessary to provide the PageScan II information to the patent examiner because it was mentioned as a component to Dr. Chung's invention. Dr. Chung did not consider PageScan II prior art because it could not perform all the functions performed by his patent equipment.

17. Mr. Upchurch testified that the PageScan II and its materials are cumulative because of the disclosure of digital imaging. Dr. Shamos testified that these references are

material because Avante knew about the PageScan II features and made false statements in the prosecution of their patents.

18. The jury found the PageScan II documents to be material information with regard to the '944 and '313 patents.

### **Conclusions of Law**

Title 37 C.F.R. § 1.56(a) mandates that "[e]ach individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the [PTO]." A violation of this duty renders a patent unenforceable. **Atlas Powder Co. v. Ireco Chemicals**, 773 F.2d 1230, 1234 (Fed. Cir. 1985). "To prove that a patent is unenforceable due to inequitable conduct, the alleged infringer must provide clear and convincing evidence of (1) affirmative misrepresentations of a material fact, failure to disclose material information, or submissions of false material information and (2) an intent to deceive." **Rentrop v. Spectranetics Corp.**, 550 F.3d 1112, 1119 (Fed. Cir. 2008) (quoting **Impax Labs., Inc. v. Aventis Pharms. Inc.**, 468 F.3d 1366, 1374 (Fed. Cir. 2006)).

Under the first prong, "[a] fact is material if it is material under either PTO Rule 56 or the 'reasonable examiner' standard." **Id.** (citing **Digital Control, Inc. v. Charles Mach. Works**, 437 F.3d 1309, 1316 (Fed. Cir. 2006)). "PTO Rule 56 states:

[I]nformation is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

- (2) It refutes, or is inconsistent with, a position the applicant takes in:
- (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability."

**Id.** at 1119-20 (quoting 37 C.F.R. § 1.56(b)). Under the reasonable examiner standard, information is material if there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether or not to issue the patent. **Id.** at 1120.

Under the second prong, an intent to deceive may not be established only by a failure to disclose information that is later found to be material. **Star Scientific Inc. v. R.J. Reynolds Tobacco Co.**, 537 F.3d 1357, 1366 (Fed. Cir. 2008). "Rather, to prevail on the defense, the accused infringer must prove by clear and convincing evidence that the material information was withheld with the specific intent to deceive the PTO." **Id.** See also **Rentrop**, 550 F.3d at 1120 ("The intent element requires that 'the involved conduct, viewed in the light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.'" (quoting **Impax Labs.**, 468 F.3d at 1374-75). "The more material the omission or the misrepresentation, the lower the level of intent required to establish inequitable conduct and vice versa." **Id.** (quoting **Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.**, 120 F.3d 1253, 1256 (Fed. Cir. 1997)). Gross negligence by itself does not justify an inference of an intent to deceive; rather, when nondisclosure of information is at issue, there must be a showing by clear and convincing evidence "that the applicant made a deliberate decision to withhold a known



material reference." **Molins PLC v. Textron**, 48 F.3d 1172, 1181 (Fed. Cir. 1995). See also **McKesson Info. Solutions, Inc. v. Bridge Med., Inc.**, 487 F.3d 897, 913 (Fed. Cir. 2007) ("Intent to deceive cannot be inferred simply from the decision to withhold [information] where the reasons given for the withholding are plausible.") (internal quotations omitted) (alteration in original). Intent may, however, be inferred from indirect or circumstantial evidence. **Star Scientific**, 537 F.3d at 1366.

If both prongs of the inequitable conduct defense are proven by clear and convincing evidence, the Court must "balance the equities to determine whether the patentee has committed inequitable conduct that warrants holding the patent unenforceable." **Rentrop**, 550 F.3d at 1120 (quoting **Impax Labs.**, 468 F.3d at 1375). "The more material the omission or the misrepresentation, the lower the level of intent required to establish inequitable conduct, and vice versa." **Id.** (quoting **Critikon**, 120 F.3d at 256).

Mindful of the foregoing standards, the Court examines Defendants' claim of inequitable conduct.

Both the '944 and the '313 patents claim priority to the Cummings patent. The experts however, disagree on Dr. Chung's obligation to advise the PTO of the Cummings patent after its discovery in February 2004. Indeed, the experts cannot even agree on whether the Cummings patent is in fact prior art. Defendants argue that the Cummings patent is prior art and material. Plaintiff counters that it cannot be material unless it is prior art, which it is not

relative to Plaintiff's two patents because of the priority dates stated above. Neither Plaintiff nor Defendants cite case law in support of their respective positions.

Notwithstanding the parties position on the issue, the case law appears to be unsettled and requires disclosure "where the information establishes either a prima facie case of unpatentability or refutes, or is inconsistent with a position the applicant" takes before the PTO. **Dayco Products, Inc. v. Total Containment, Inc.**, 329 F.3d 1358, 1363-64 (Fed. Cir. 2003). But cf. Pfizer, Inc. v. Teva Pharms. USA, Inc., 518 F.3d 1353, 1366 (Fed. Cir. 2008) (holding that information is material in inequitable conduct determinations "if a reasonable examiner would have considered *such prior art* important in deciding whether to allow the patent application" and, that under a "reasonable examiner standard," "a misstatement or omission may be material even if the misstatement or omission would not have rendered the invention unpatentable") (emphasis added) (internal quotations omitted).

The jury found that the Cummings patent was material to the '944 patent. Defendants' expert witness opined that the patent examiner should have been provided the Cummings patent so he could have made the priority determination. The Court need not reach the materiality question, however, because it finds that there was no intent by Plaintiff to deceive the patent examiner. Believing that the Cummings patent was not prior art, Dr. Chung concluded that his patents had priority and he was entitled to amend the '944 patent application because his prior filings with the PTO referenced direct recording electronic voting equipment. This is a plausible and credible reason for his non-disclosure. Although Defendants challenge the correctness of this reason, the Court finds that Dr. Chung is sincere

in it being the basis for his decision. The Court further finds that he acted in good faith and without intent to deceive when not disclosing the Cummings patent on the '944 patent application.

The jury also found the Stewart patent to be material to the '944 patent. Citing the Stewart patent and its use of jurisdictional identifiers, the patent examiner rejected claims in the '313 patent. Dr. Chung and Mr. Berard defended the '313 patent in responsive filings with the PTO. The Stewart patent was not referred to by Plaintiff in the '944 patent application. Dr. Chung testified this was an error on his and Mr. Berard's part. The Stewart patent should have been brought to the patent examiner's attention in connection with the '944 patent. As noted above, Mr. Frech was the patent examiner for both the '944 and '313 patents. He cited the Stewart patent in the '313 action ten days after the September 22, 2004, allowance of notice in the '944 patent. Dr. Chung testified that he did not believe that it was necessary to cite the Stewart patent in the '944 patent application because Mr. Frech had previously cited that patent in the '313 patent examination when rejecting the application based on the Stewart patent's use of jurisdictional identifiers. Again, jurisdictional identifiers are a major component of the '944 and '313 patents. Plaintiff's argument that the Stewart patent was cumulative of the Chumbley and McClure patents, both of which were before the patent examiner in connection with the '944 patent, is not supported by any case law, but rather by Mr. Upchurch's testimony. Both the Chumbley and McClure patents disclose jurisdictional identifiers; consequently the fact that the Stewart patent was not disclosed in

the '944 patent is immaterial because that patent is cumulative of the Chumbley and McClure patents.

Information is not material if it is cumulative of other information already disclosed to the PTO. **Star Scientific**, 537 F.3d at 1367. Plaintiff's reliance on the cumulative theory is inconsistent with Dr. Chung's testimony that he chose not to disclose the Stewart patent on the '944 patent because he considered the disclosure unnecessary due to Mr. Frech's having previously alerted Plaintiff to the Stewart patent in the prosecution of the '313 patent and not because he considered the Stewart patent to be cumulative of information already before the patent examiner. Dr. Chung testified that it would not be wise to hide the Stewart patent from Mr. Frech when Mr. Frech had already disclosed the patent to Dr. Chung within a relatively close period of time. This testimony is plausible and logical and negates any inference of a deceitful intent by Dr. Chung or Mr. Berard. Again, although the Stewart patent is material, Defendants have failed to prove an intent to deceive.<sup>2</sup>

The third, and final, claim of inequitable conduct relates to the PageScan II references.

It is undisputed that Avante met with PDI and purchased PageScan II days before Plaintiff filed its provisional filings in the '944 patent. Those filings briefly describe the PageScan II scanner. The '313 patent application inaccurately describes the PageScan II

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<sup>2</sup>Defendants rely on the MPEP and its admonition that patent applicants should not rely on the memory of a patent examiner. This manual is, however, a procedural handbook and not patent law. Further, Plaintiff points out that Mr. Frech was an experienced primary patent examiner and it was not illogical for Dr. Chung to believe that Mr. Frech considered the Stewart patent when examining in the 944 patent application.

device as a scanner that can scan only specific grid lines and not an entire page. The PageScan II and other optical scanners were purchased and tested by Plaintiff for use in its inventions. PDI's president testified that his company does not sell voting machines, but there is evidence that a similar optical scanner is a component to Plaintiff's invention. Dr. Chung testified that he did not believe the PageScan II to be prior art because it could not perform all of the necessary functions of Plaintiff's inventions. The Court finds Dr. Chung's testimony to be credible. Defendants stipulated that the "true functionality" of the PageScan II was correctly described in the provisional application quoted herein. They assert, however, that the description of the PageScan II in the '944 patent as a conventional reader requiring pre-sorting (see '944 patent, col. 14, ll. 45-59) and in the '313 patent as conventional ballot readers with sensors on a fixed grid pattern (see '313 patent, col. 17, ll. 58-67) misrepresents the functionality of the PageScan II. Regardless, the PageScan II and other conventional scanners are part of the patent specifications and were before the patent examiner during the prosecution of the '944 and '313 patents. The function of scanning is obviously material to these two patents. The Court presided over a six-day trial in which the major issue before it and the jury was the imaging function of a scanner and other components of these patents. There was no evidence during that trial that Dr. Chung intended to mislead the patent examiner. Moreover, it would be unwise to continually mention the PageScan II in the patent application and in the language of the patent, and then intentionally misrepresent the function of that scanner. Defendants have failed to prove intent.

For the foregoing reasons, the Court finds that Premier Election Systems and Sequoia Voting Systems have failed to show inequitable conduct before the United States Patent and Trademark Office sufficient to declare U.S. Patent Nos. 6,892,944 and 7,077,313 unenforceable.

/s/ Thomas C. Mummert, III  
THOMAS C. MUMMERT, III  
UNITED STATES MAGISTRATE JUDGE

Dated this 17th day of March, 2009.